

CLAIMS

1. A method for treating hard tissues, comprising the steps of:
 - generating a radiation from a semiconductor laser source;
 - applying a chromophorous agent with high absorption at the wavelength
- 5 of the laser to a region of a tissue to be treated, so as to have predominant absorption at a surface of the tissue;
- focusing the radiation on the surface of the tissue by means of an adapted optical system;
- exceeding a fluence threshold of the laser radiation as a function of the
- 10 tissue to be treated.
2. The method according to claim 1, characterized in that the fluence threshold of the laser radiation is between 20 and 100 J/cm².
3. The method according to claim 1, characterized in that the duration of the pulse is comprised between 10 and 50,000 µs.
- 15 4. The method according to claim 1, characterized in that the laser radiation is conveyed by means of a guided optical system.
5. The method according to claim 4, characterized in that the guided optical system is an optical fiber.
6. The method according to claim 1, characterized in that the focusing
- 20 of the radiation in output from the optical fiber on the surface of the tissue is achieved by means of a system of lenses or mirrors.
7. The method according to claim 1, characterized in that the chromophorous agent is sprayed onto the tissue by means of an aerosol.
8. An apparatus for treating hard tissues, comprising:
 - 25 -- a system for applying a chromophorous agent to a surface of a tissue;
 - a source of laser light that contains at least one semiconductor laser;
 - an optical system for focusing the laser light on the surface to be treated;
- characterized in that the fluence threshold of the generated laser radiation is variable.
- 30 9. The apparatus according to claim 8, characterized in that the fluence

threshold of the laser radiation is comprised between 20 and 100 J/cm².

10. The apparatus according to claim 8, characterized in that the duration of the pulse is comprised between 10 and 50,000 µs.

11. The apparatus according to claim 8, characterized in that the laser
5 radiation is conveyed by means of a guided optical system.

12. The apparatus according to claim 11, characterized in that the guided optical system is an optical fiber.

13. The apparatus according to claim 12, characterized in that the optical fiber has a diameter of 5 to 2000 µm.